In the Claims

CLAIMS

1. (Currently amended) A method for producing a lens, comprising:

~~in particular a~~ providing spectacle lens to correct ~~, wherein central~~ aberrations of an eye ~~, to be corrected,~~ of an ametropic person ~~are to be corrected, such as sphere, cylinder and axis, being compensated~~, ~~wherein~~ the spectacle lens comprising at least one refracting surface ~~of said lens~~ is configured to implement, ~~in a way that~~ for at least one direction of view, ~~both~~ a dioptric correction of the ametropia, wherein the at least one refracting surface comprises a shape; ~~is performed~~ and

changing at least a portion of the shape of the at least one refracting surface to correct aberrations of higher order ~~whose effects on the visual acuity and/or contrast viewing are a function of the size of the pupillary aperture of said eye to be corrected, are corrected by said lens~~.

2. (Currently amended) The method as claimed in claim 1, wherein a spherical aberration is corrected as an aberration of higher order.

3. (Currently amended) The method as claimed in claim 1, wherein a coma is corrected as an aberration of higher order.

4. (Currently amended) The method as claimed in claim 1, wherein a trefoil aberration is corrected as an aberration of higher order.

5. (Currently amended) The method as claimed in claim 1, wherein values required for correcting said aberrations are determined by measuring visual acuity by implementing at least one of the following methods: ~~, in particular~~ by determining refraction; ~~and/or by measuring a wavefront and/or~~ by measuring a wavefront; and ~~and/or~~ by skiaskopy.

6. (Previously presented) The method as claimed in claim 5, wherein said wavefront is measured with a Hartmann-Shack sensor.

Claim 7-8 (Canceled).

9. (Currently amended) The method as claimed in claim 1, wherein at least ~~50%, preferably at least~~ 85%, of said ~~spherical aberration, is~~ aberrations of higher order are compensated solely by a correction of ~~said~~ central aberrations~~, such as~~ comprising at least one of: sphere, cylinder and axis.

Claims 10-12 (Canceled).

13. (Previously presented) The method as claimed in claim 1, wherein a region in said lens is corrected for an infinite object distance.

14. (Previously presented) The method as claimed in claim 1, wherein a region in said lens is corrected for a finite object distance.

15. (Previously presented) The method as claimed in claim 1, wherein a transition of a region with highest visual acuity into a region with slightly reduced visual acuity is performed via an edge.

16. (Previously presented) The method as claimed in claim 1, wherein a transition of a region with highest visual acuity into a region with slightly reduced visual acuity is performed smoothly.

17. (Previously presented) A lens produced according to ~~one~~ the method of claim 1, characterized by a design as a spectacle lens, contact lens or intraocular lens.

18. (Currently amended) The lens as claimed in claim 17, characterized by refractive and/or diffractive structures in the at least one refracting surface, ~~both for the dioptric correcing surface,~~ both for the dioptric correction of an ametropia and for the correction at least of one aberration of higher order for at least one direction of view.

19. (Previously presented) The lens as claimed in claim 17, characterized by materials of glass and/or plastic.

20. (New) The method as claimed in claim 1 further comprising:

measuring a size of an pupillary aperture for the eye; and

using the measurement for the changing of the shape of the at least one refracting surface.

21. (New) The method as claimed in claim 1, wherein the changing comprises forming an aspheric surface.

22. (New) The method as claimed in claim 1, wherein the changing comprises forming an atoric surface.

23. (New) The method as claimed in claim 1, wherein the changing comprises forming a free form surface.

24. (New) A method for producing a lens, comprising:

providing spectacle lens to correct aberrations of an eye of an ametropic person, the spectacle lens comprising at least one refracting surface configured to implement, for at least one direction of view, a dioptric correction of the ametropia, wherein the at least one refracting surface comprises a shape;

changing at least a portion of the shape of the at least one refracting surface to correct aberrations of higher order; and

wherein at least 50% of said aberrations of higher order are compensated solely by a correction of central aberrations.

25. (New) The method as claimed in claim 24, wherein the central aberration comprises a sphere.

26. (New) The method as claimed in claim 24, wherein the central aberration comprises a cylinder.

27. (New) The method as claimed in claim 24, wherein the central aberration comprises an axis.